



Overview of February 2021 Arctic Weather Event

MO PSC Meeting

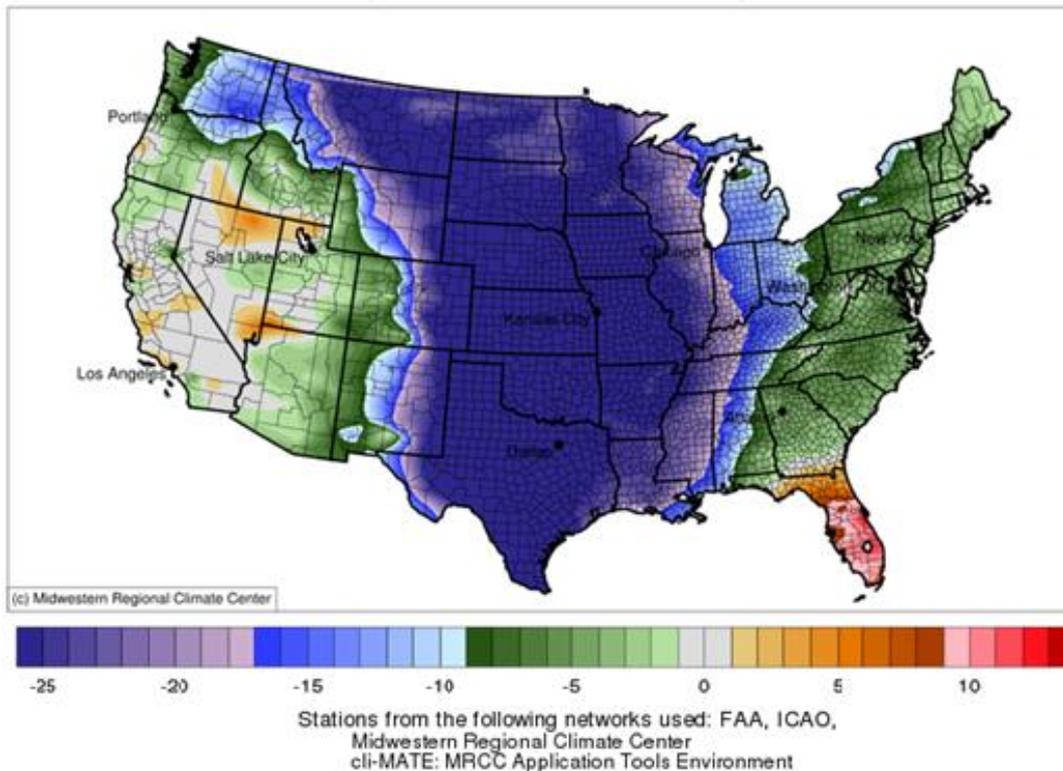
April 21, 2021

Melissa Seymour
Regional Executive - MISO Central

MISO was well positioned for the Arctic Weather by preparing for the extreme cold weather pattern weeks in advance

Average Temperature (°F): Departure from 1981-2010 Normals

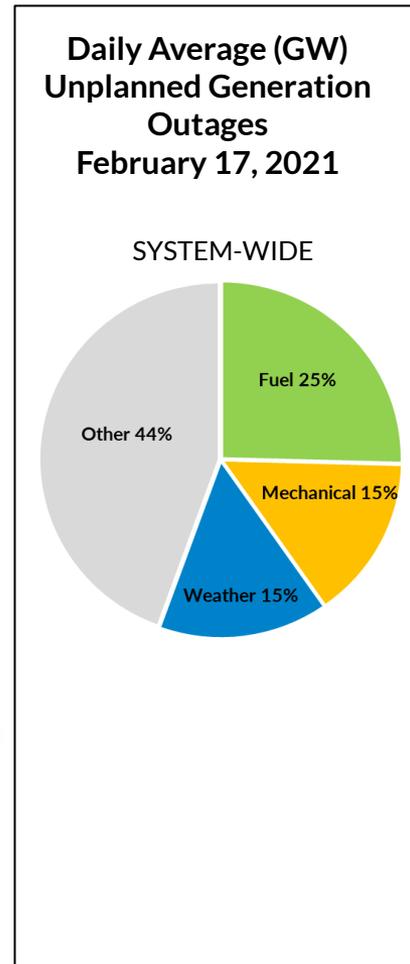
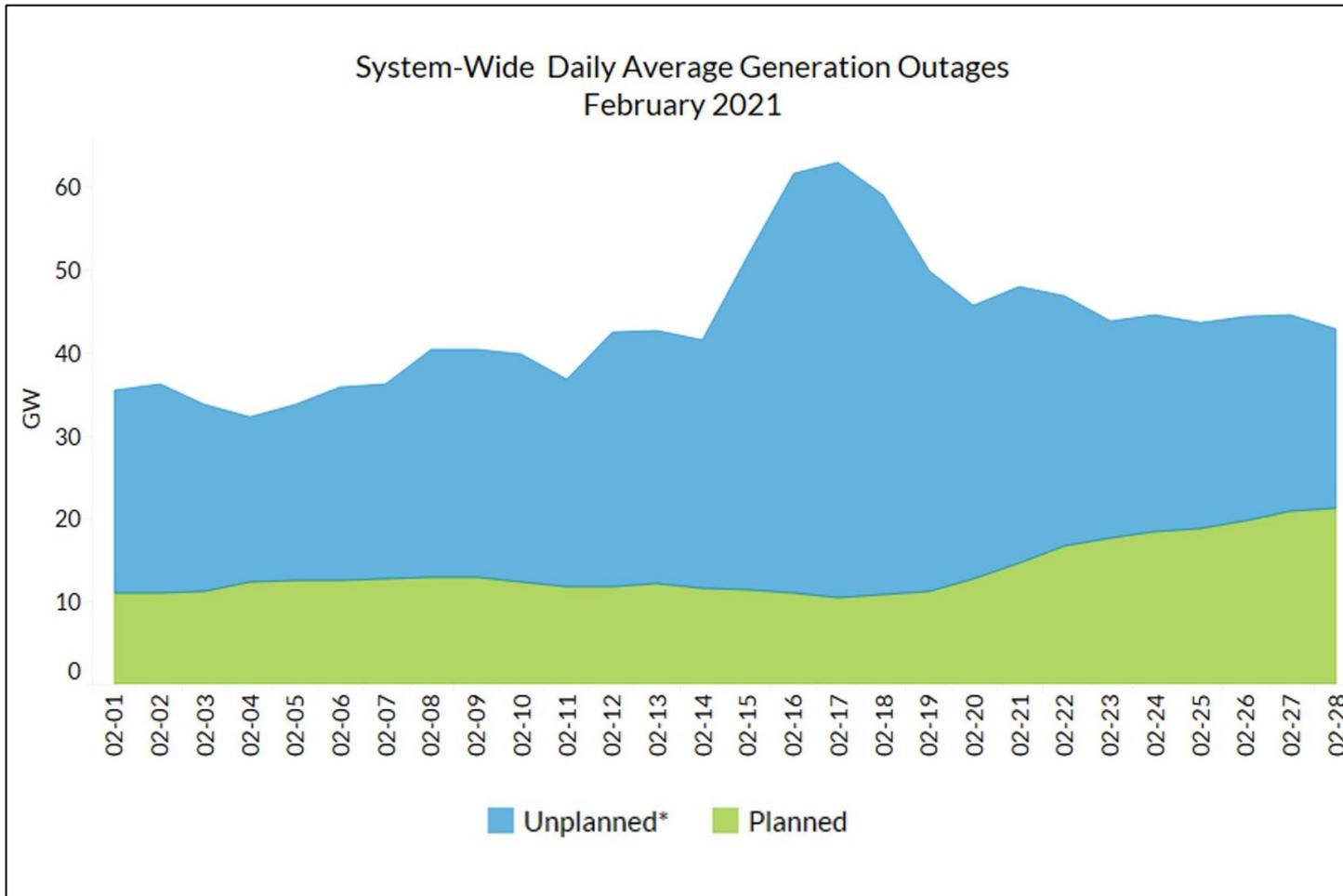
February 12, 2021 to February 18, 2021



Advance Preparation

- Conducted Winter Readiness Workshops
- Issued Informational Advisories
- Issued a Cold Weather Alert
- Committed additional generation well in advance of need
- Extended the start/stop times for generation resources to avoid start failures due to cold weather
- Confirmed planned outage and return-to-service dates/times for generation and transmission outages

However, unplanned outages and additional availability risks led to emergency declarations



Unprecedented flows onto and across our system aided MISO and our neighbors

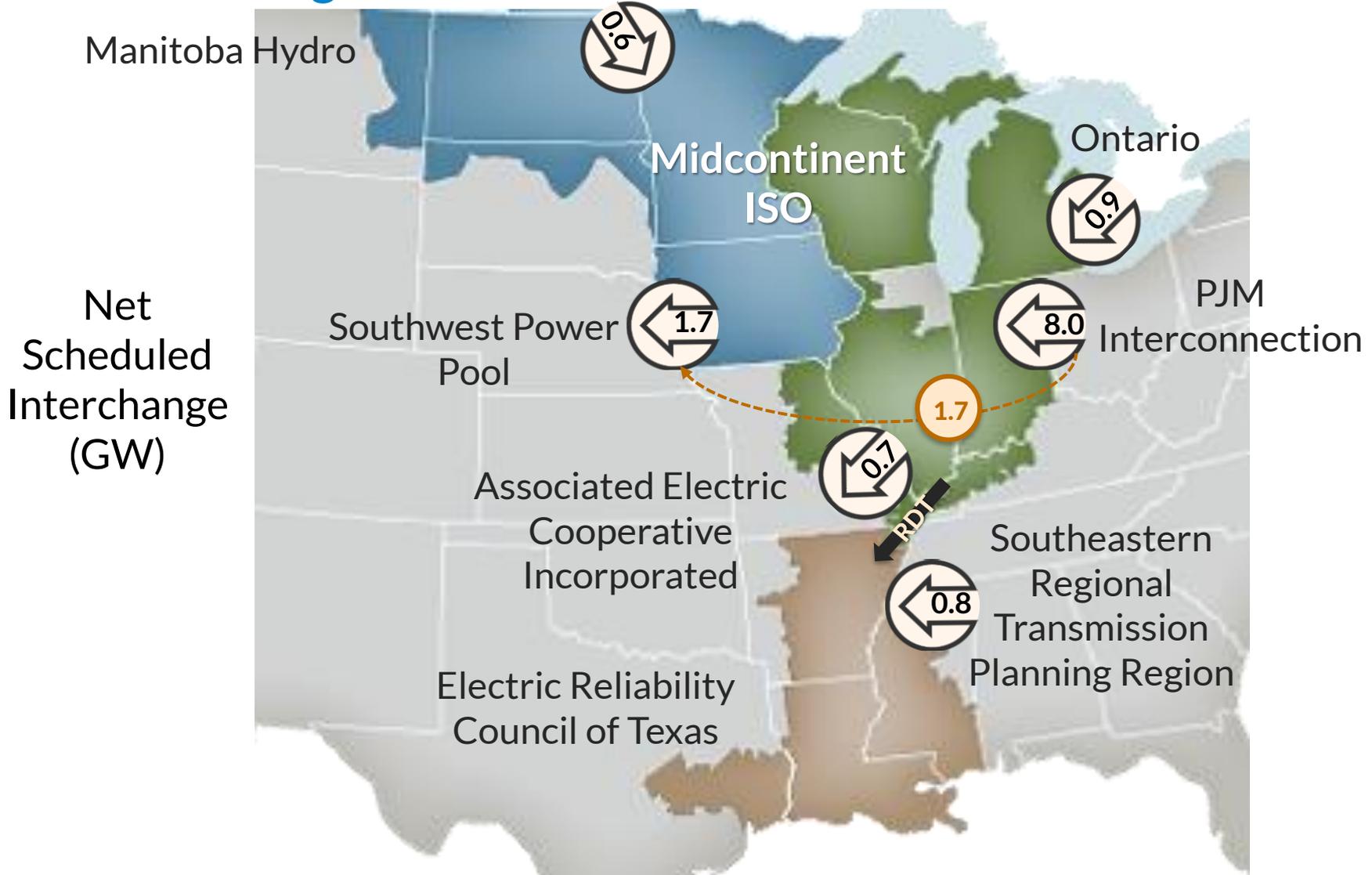
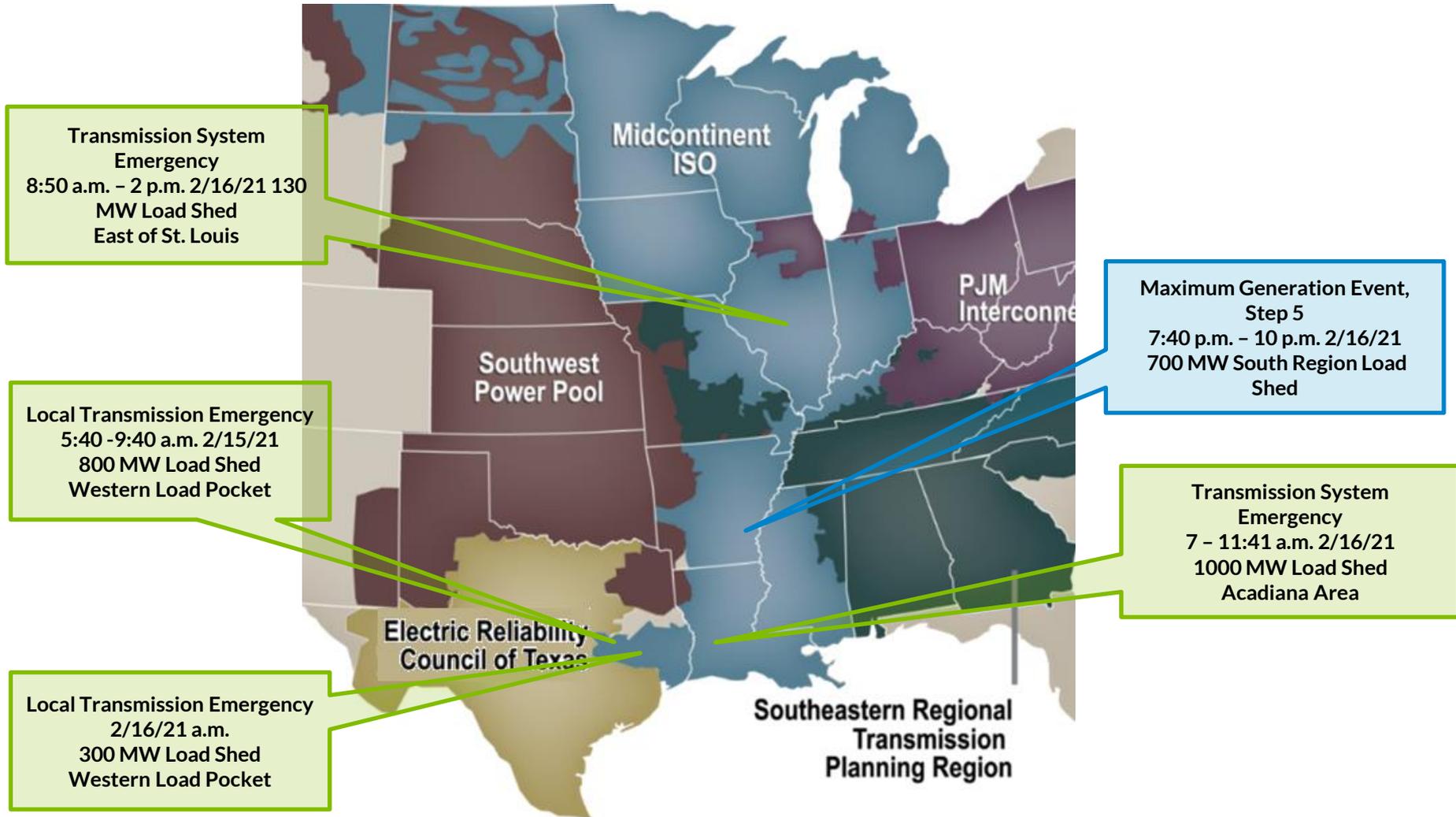


Image represents average flows into, out of and through MISO over 3 days (February 15-17, 2021)

RDT = Regional Dispatch Transfer, which has a North-South limit of 3 GW

Through the operational challenges, MISO's procedures worked, limiting load shed to local events and a two-hour regional event



This event serves to illustrate the urgency to complete the work summarized in MISO's Reliability Imperative

- Availability is less than expected when conditions are tight, and the significant drivers are unique to seasons (Addressed through Market Redefinition: Resource Accreditation)
- Sufficient transfer capability within and between markets is critical to enabling the advantages of intra and inter-regional diversity (Addressed through Long Range Transmission Planning)
- Assessment of uncertainties is critical for adequate and efficient commitment and real-time operational response (Addressed through Operations of the Future)
- Resource adequacy evaluation below current LRZ levels is necessary (Addressed through Market Redefinition: Resource Adequacy)



Questions?